



Tropentag, September 16-18, 2026, hybrid conference

“Towards multi-functional agro-ecosystems
promoting climate resilient futures”

Whose restoration? Direct mobile-money payments, intra-household dynamics, and the limits of digital equity in farmer-led tree restoration in Kenya

FRANCIS ODUOR¹, CHRISTOPHER KETTLE², FRANCESCA GRAZIOLI³

¹*University of Nairobi, Dept. of Food Environment and Consumer Behaviour, Kenya*

²*The Alliance of Bioversity International & CIAT, Multifunctional landscapes, Italy*

³*Bioversity International, Multifunctional Landscapes,*

Abstract

Large-scale tree-based restoration in sub-Saharan Africa has often delivered uneven benefits across gender and socio-ecological gradients, with women, pastoralists, and land-constrained smallholders under-represented in species choice and payment flows. Mobile-money disbursements routed directly to individuals are widely assumed to resolve such inequities by bypassing intermediaries. This study asks whether direct mobile-money payments, combined with a progressive payment model, in fact broaden who benefits from restoration — and identifies the intra-household conditions under which they do not.

We analyse MyFarmTrees, a co-designed digital platform piloted from 2022 across three contrasting zones in Kenya: smallholder farmlands in Siaya, semi-arid community rangelands in Laikipia, and arid pastoral landscapes in Turkana. The platform links seed collectors, nurseries, and farmers through three mobile applications, a QR-code traceability system from seed to surviving on-farm tree, and M-Pesa payments tied to verified planting milestones. Evidence comprises administrative data from 3,692 enrolled farmers, payment transaction records from two disbursement cycles, and 13 in-depth farmer interviews conducted in the Siaya cluster in November 2025.

By June 2025, 210,920 seedlings of 30 mostly native species had been distributed across approximately 2,500 hectares, supported by 27 registered tree nurseries and 85 village-based monitors enabling non-smartphone participation. Two payment cycles were implemented between December 2024 and August 2025: an initial flat-rate cycle that piloted the digital payment system and surfaced equity insights across ecological zones, followed by a progressive tier system designed to guarantee a meaningful minimum payout for all participants regardless of farm size or agro-ecological context. Interview evidence indicates that payments were reinvested in school fees, farm inputs, livestock, housing, small enterprises, and tree protection. Critically, however, equity outcomes were conditional on household structure: female-headed households retained full control of incentives, whereas in patrilineal households, husbands sometimes captured the cash despite the direct-to-individual payment design.

These findings qualify the dominant narrative that mobile-money incentives automatically advance gender equity and suggest that direct payments must be paired with household-level gender sensitisation to deliver on their equity potential in climate-resilient restoration.

Keywords: Gender equity, intra-household dynamics, Kenya, landscape restoration, mobile-money incentives, progressive payments